TF Katrina/Rita

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Objectives

- To share PM experiences in disaster relief efforts in aftermath of Katrina, with EH focus
- Points to share:
  - What we did
  - Big Navy successes
  - Big lessons learned
  - How to be best prepared
  - Picture show

Disclaimer

- Content of presentation represents my own findings & opinions.
- It does not constitute official USG, DOD, DON, USS IWO JIMA, CRTS-2/NMCP or NHGL policy or approval.

Perspectives

- PMO assigned to CTRS-2/NMCP Med/Surg team aboard USS IWO JIMA (LHD 7)
- Most of activity in EH:
  - Habitability, water quality, general sanitation, air quality, disease threats

Overlapping Professions of EH–PM–PH

- Definition of **EH**, per NEHA:
  - Environmental health & protection refers to protection against environmental factors that may adversely impact human health or the ecological balances essential to long-term human health & environmental quality, whether in the natural or man-made environment.
- Definition of **PM**, per ACPM:
  - Preventive Medicine aims to promote & preserve health & longevity in individuals & populations, use epidemiologic tools to identify high-risk groups in populations & prevent & limit disease & injury, enhance quality in healthcare systems, facilitate early diagnosis with screening & education & improve the quality of life.
- Definition of **PH**, per APHA:
  - Public health is dedicated to the improvement of the public's health, for the equity in health status for all, advocating for a healthy global society, emphasizing prevention & promoting & protecting environmental & community health.

Disaster Medicine 101

Definition of Disaster

"A disaster is a result of a vast ecological breakdown in the relation between humans & their environment, a serious or sudden event on such a scale that the stricken community needs extraordinary efforts to cope with it, often with outside help or international aid."

[EK Noji: *The Public Health Consequences of Disaster*, 1998]

Classification of Disasters

- **Natural Problems**
  - **Hurricanes**
  - Severe weather
  - Earthquakes
  - Volcanic eruptions
  - Floods
  - Tsunami
  - Severe heat/ severe cold
  - Disease Outbreaks
- **Man-made Accidental (Technological) Problems**
  - Radiation
  - Hazardous Chemicals
  - Oil spills
  - Biological
- **Terrorism (Intentional)**
  - Chemical
  - Biological
  - Radiological
  - Nuclear
  - Explosion

Public Expectations (All the Time)

- Safe & ample food
- Safe & plentiful water
- Shelter
- Solid waste & liquid waste disposal
- Safety (police, fire)
- Medical Care

Civilian & Military DM Commonalities

- Broad span:
  - Scene of disaster to hospital bed
  - Precedes disaster & continues long afterwards
- Issues common to both:
  - Large #’s of casualties
  - Casualty care prehospital & hospital
  - Property destruction
  - Response assets stretched thin
  - Bringing order to chaos
  - PH issues
  - Assisting in return to normal

Strengths

- **Military:**
  - C^4 (command, control, comms, coordination)
  - Large pool of personnel
  - Logistics (rapid lift, supply chain, personnel movement)
  - Experience (MOOTW, HA, Peace keeping, Peace Enforcement, Combat, Large scale disaster ops)
  - Funding
  - Disciplined force in uniform with command structure
  - Must participate
  - Force health protection (vaccination, PPE, threat assessment, threat mitigation, strong PH infrastructure, medical support, echelons of care)
  - Medical evacuation (aeromedical, ambulance, ship)
- **Civilian:**
  - Know the local terrain (know populace, politics)
  - Professional expertise
  - First responder expertise
  - Prehospital plans & MOUs in plan
  - Law enforcement

Weaknesses

- **Military:**
  - Must be invited in by governor
  - Not first responders
  - Must be released by President
  - Martial law must be declared
  - Federal disaster area declared
  - Difficult to respond within 1st 72hrs
  - No police powers
- **Civilian:**
  - May be no clear lines of authority
  - Funding limitations
  - No imperative to show; if show must be compensated
  - Can be readily overwhelmed by large scale disasters

TF Katrina

CRTS-2/NMCP

Mission Statements

- IWO JIMA (LHD 7) served as command & control center for JTF Katrina in NO
- JTF Katrina was a combined military effort to provide aid for Hurricane Katrina affected areas
- DON's involvement in Hurricane Katrina/Rita was in HA ops & recovery efforts, led by FEMA, in conjunction with other DoD components

Famous Quotes

- "Considering the dire circumstances that we have in New Orleans, virtually a city that has been destroyed, things are going relatively well." –FEMA Director Michael Brown, 1 Sep 2005
- "Louisiana is a city that is largely under water." –Homeland Security Secretary Michael Chertoff, news conference, 3 Sep 2005

Hurricane Summary

- Hurricane Katrina:
  - Category 5 Hurricane Katrina hit MS, AL, LA Gulf Coast on 29 Aug 05, resulting in severe flooding & extensive structural damage from 4 breached levees in & around NO
  - NO (35th largest city) suffered unparalleled collapse of its entire infrastructure (police, water, sewage, solid waste, fire)
  - Response personnel filled a vacuum & reacted to people filled with fear & despair
- Hurricane Rita:
  - Rita hit southwest LA & southeast TX Gulf Coast on 21 Sep 05, resulting in hurricane damage
  - Better management
  - No deaths

Navy's Overall Contribution

- Evacuated >6,000 residents
- Medevaced 100's
- Delivered hundreds of thousands of lbs of food, water, supplies
- Provided showers, hot meals, beds, medical support, encouragement to relief workers & forces ashore

TF Ships in Hurricanes

- Hurricane Katrina:
  - Navy mobilized 16 ships, 68 aircraft, >10,000 naval personnel to affected Gulf coast region
  - USS IWO JIMA departed homeport (NOB) 31 Aug 05 & made 3d transit, down east coast & arrived in Gulf of Mexico off Biloxi MS on 3 Sep for HA ops
  - Other support ships, inc., USS Tortuga (LSD 46), USS Shreveport (LPD 12), USS Grapple (ARS 53), USS Whidbey Island (LSD 41), USS Bataan (LHD 5), USS Grapple (ARS 53)
  - IWO JIMA brought critically needed showing of the flag, manpower, medical personal, supplies, command & control, a safe haven, SAR & evacuation capabilities
- Hurricane Rita:
  - In NO onloaded supplies & 647 Marines of 24th MEU
  - IWO JIMA left NO on 21 Sep 05, transited down MS river, to avoid Hurricane Rita hitting NO & to assist FL, TX, LA
  - Other ships sortied to avoid storm [USS Shreveport (LPD 12), USS Tortuga (LSD 46)]
  - Joined up with USS Tortuga (LSD 46) & USNS Patuxent (T-AO 201)
  - IWO JIMA provided SAR & evacuation capabilities

PMO Activities

- EH (habitability, water quality, general sanitation, air quality, disease threats)
- Reviewed DNBI
- Outbreak clusters
- PDHA
- Decon measures
- E&T
- Hook-ups (personnel, medicinals)
- Reviewed ship’s medical SOPs
- After action report

CRTS-2/NHP Missions

- Augmented ship's sickcall (ship's company, embarked troops, 1st responders, civilians, forces ashore)
- Inpatient Medical/Surgical:
  - >50 surgical procedures
  - Tx'ed, stabilized & medevaced (military MTFs, W. Jefferson, E. Jefferson, Ochsner)
- Supported community hospitals:
  - Liaised, evaluated, coordinated supplies
- Manned ship's Rescue Command Center
- Training of ship's medical
- POMI generated NDBI statistics
- Ashore & afloat MHS
- Supported solo PMO
- Conducted PDHA evolution for ship & embarked forces

PM - Key Findings

- Cell phones indispensable
- Alphabet soup inter-agency collaboration critical (NG, Army, Navy, PHS, ICE)
- Yes attitude to all requests, being proactive, genuine concerns, entertaining VIPs, hooking key people up with one-another, dissemination of timely written reports, all paid dividends
- Concerns over water quality, IAQ, air pollution, toxic soup foremost among personnel
- Diarrhea rare in IWO JIMA sick call though reported to be common ashore; exclusively bottled water

More Key PM Findings

- Little non-toxigenic/non-epidemic *Vibrio cholerae* & *Vibrio parahaemolyticus* reported; mostly wound-associated *Vibrio vulnificus* more commonly reported
- Mosquito-borne viruses & parasites feared but little seen
- Networking was everything
- Be blessed with a terrific PMT & reward them for hard work done
- Get backing of OIC
- Report your findings up the chain of command & to requesters

EH LESSONS LEARNED

- Helpful:
  - Being ship based efficient; habitability, comms, supplies & computer needs readily met.
  - State water commissioner
  - Clear mandate
  - Coming prepared
- Not helpful:
  - CDC & EPA
  - FD/PMU (different mandate, large footprint)
- Senior PMO &/or EHO, with PMT, must be part of every disaster relief mission & an intrinsic part of shipboard deployed Med/Surg team.

More EH Lessons Learned

- Miscellaneous remarks:
  - ROWPUs in industrially contaminated environment must use CBR cartridge
  - Colilert kits must be current to ensure accuracy
  - Water transport trucks are suspect & local water on-loaded suspect
  - For ground based forces, provisions for showers, decon stations, toileting & laundry to be strongly encouraged
  - Medical must provide QM water oversight:
    - Don’t assume ship’s water barge & ship’s water Tx system OK
    - Don’t assume SuppO, CHENG, Ship’s Husbanding Agent have a handle on water quality.
  - Ashore emergency responders & ground forces must deploy with own bednetting & insect repellent before arrival in AOR

Suggestions

- Write pre-deployment, deployment, post-deployment briefs & deliver them to the troops
- Time-permitting get smart by spending time with NEHC staff
- Get familiar with water quality issues, inc., new draft NATO document of acute & long-term water standards
- Identify & reach out to topical experts
- Be a bridge for bringing key people together
- Write reports & get them to the decision-makers

Feb 06 Congressional & White House Reports

- 15 Feb 06: 11-member congressional House select committee issued a 520-page study of the government's response to Hurricane Katrina entitled *A Failure of Initiative*. [http://a257.g.akamaitech.net/7/257/2422/15feb20061230/www.gpoaccess.gov/katrinareport/mainreport.pdf]
- 23 Feb 06: White House issued 228-page report, entitled, *Lessons Learned*, with 125 recommendations, in 17 broad categories. [http://www.whitehouse.gov/reports/katrina-lessons-learned.pdf]
- End Feb 06: Senate report pending

Concluding Remarks

- Katrina biggest disaster since 9/11/01:
  - Katrina equivalent in impact to WMD, with 90,000mi^2 damaged, 1M people displaced, hundreds of thousands of homes destroyed or uninhabitable, collapse of all municipal services
- Will federal government be more ready for the next time?
  - Multiple post-mortems completed or pending
- Taskings for all levels of gov't:
  - Better parallel planning & readiness
- DoD issues:
  - Presently not a first responder
  - By statute must be invited
  - Should DoD should seek a broader role in future domestic disasters?
- Most critical time for saving lives is 1st 72hrs
- IWO JIMA & CRTS-2/NHP was a great success.
- Med/Surg teams should have embedded PM/EH

Thank you

Discussion/ Q&A